

TripMate

Travel Companion App

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Introduction

- TripMate is a modern travel application built using Flutter.
- It allows users to explore destinations, plan trips, book trips, and manage travel itineraries.
- Firebase integration enables authentication and secure storage of user details and bookings.
- The app features a sleek UI with smooth navigation using GetX.
- Users can log in, explore locations, calculate trip costs dynamically, and confirm their bookings.

Features Overview

TripMate offers the following features:

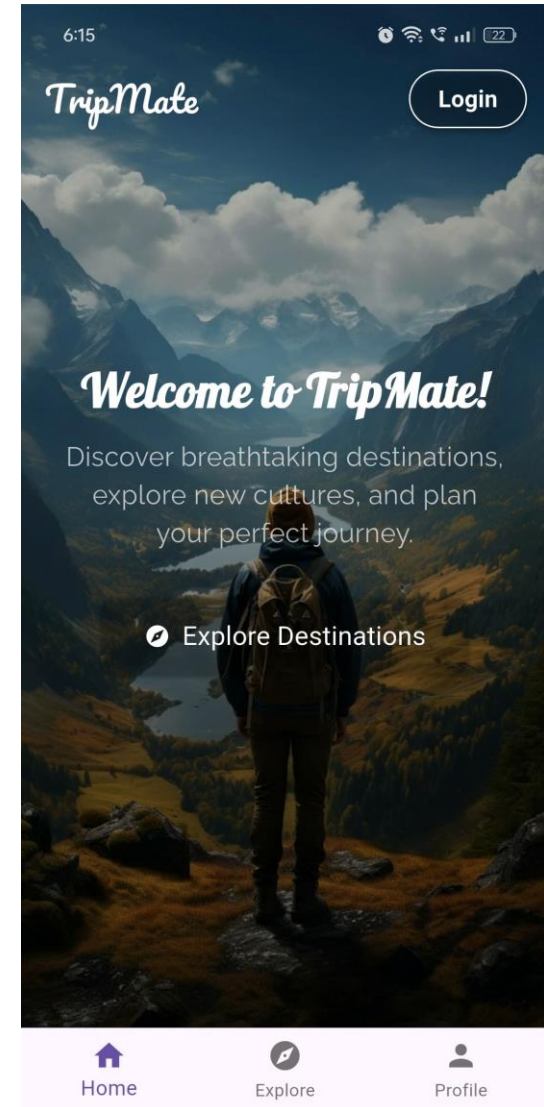
- 1. User Authentication** – Sign up, log in, and manage your profile.
- 2. Explore Destinations** – Browse famous travel spots with details.
- 3. Plan Your Trip** – Customize transportation, accommodation, and activities.
- 4. Book Trips** – Confirm bookings and receive email confirmation.
- 5. Profile Management** – View/edit profile and check past bookings.
- 6. Navigation & UI** – Interactive screens with smooth animations.

Technology Stack

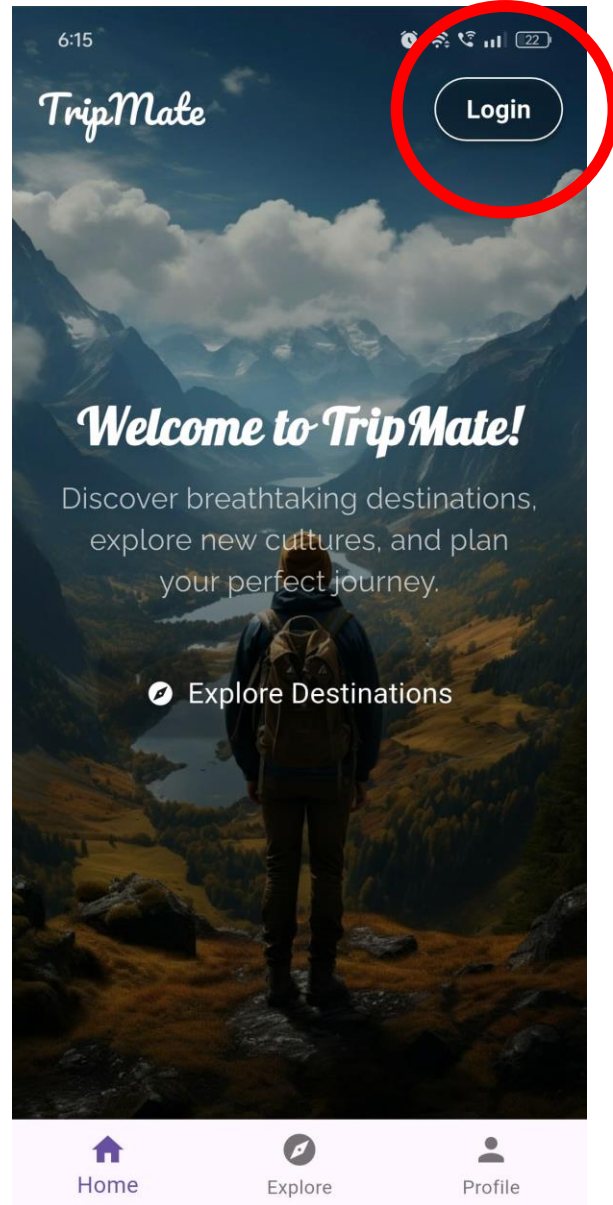
- **Frontend:** Flutter (Dart)
- **State Management:** GetX
- **Backend:** Firebase (Authentication, Firestore, Email)
- **Database:** Firebase Firestore
- **APIs Used:** Weather API, Email API (Flutter Email Sender)
- **Styling:** Google Fonts, Material UI
- **Navigation:** GetX Route Management

Home Page

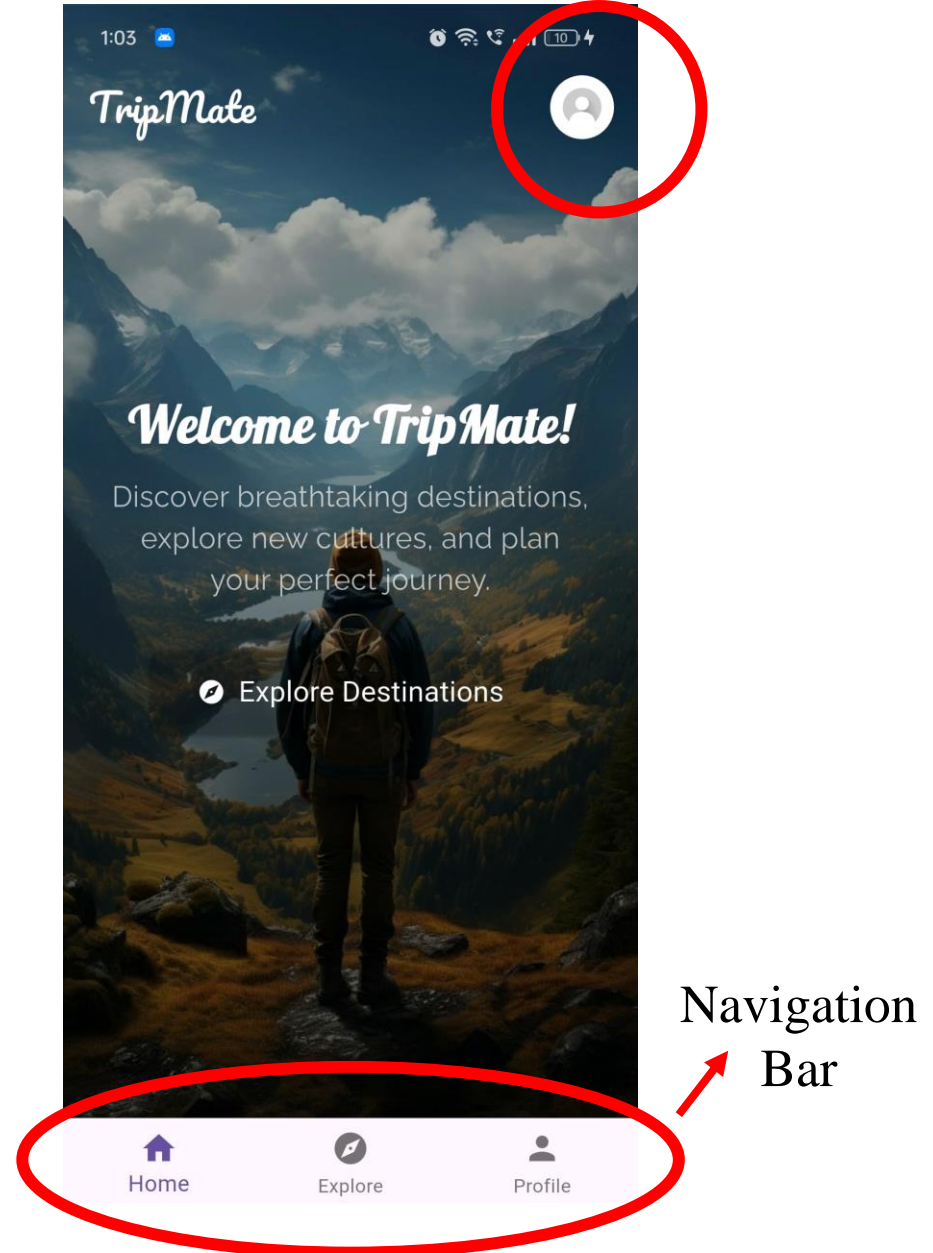
- The Home Page is the starting screen.
- Features:
 1. Welcome message.
 2. Bottom navigation (widget) for quick access.
 3. Navigation to Explore Destination



Before Login



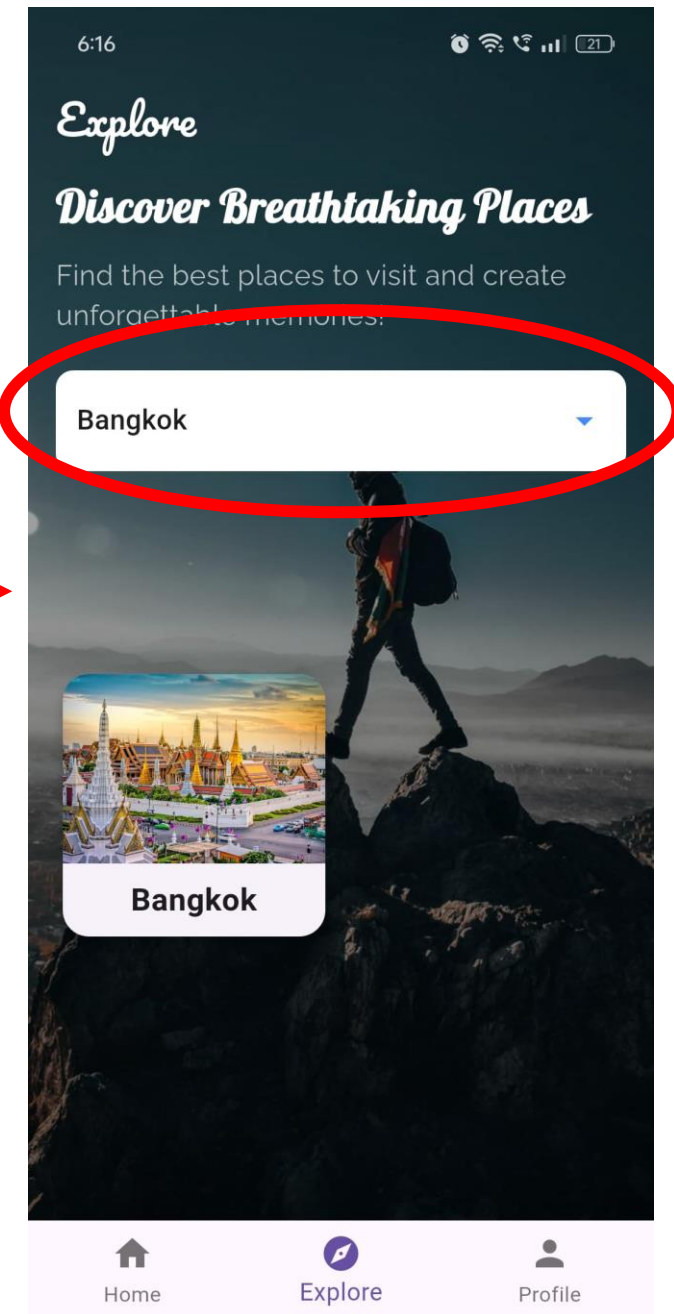
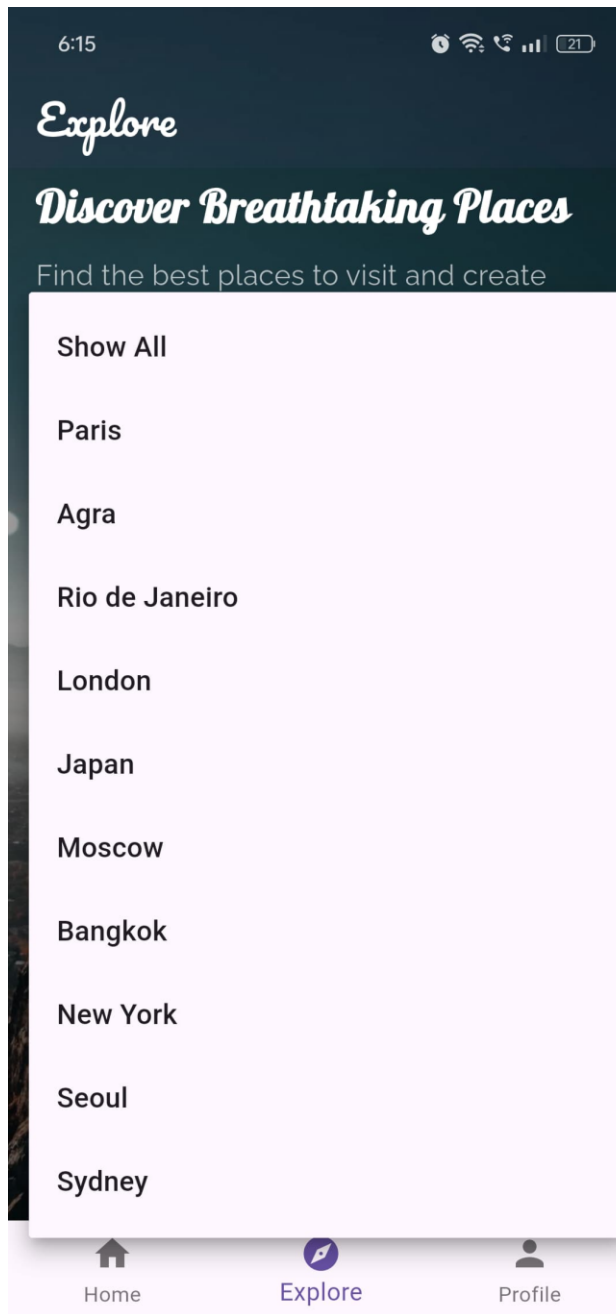
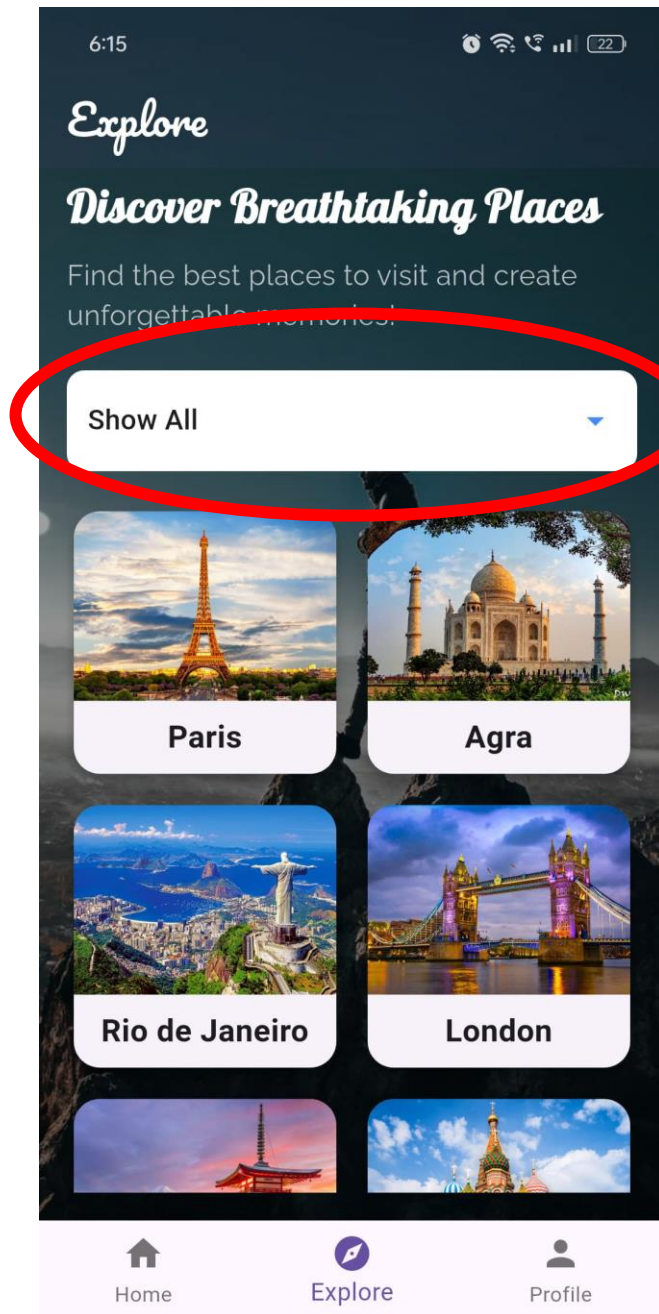
After Login



Explore Destinations Page

- Displays a list of popular travel destinations.
- Dropdown is used to display a list of cities, allowing users to easily select one.
- Once selected, the chosen city is displayed on the screen.
- Clicking on a location shows detailed information.
- Destinations include:

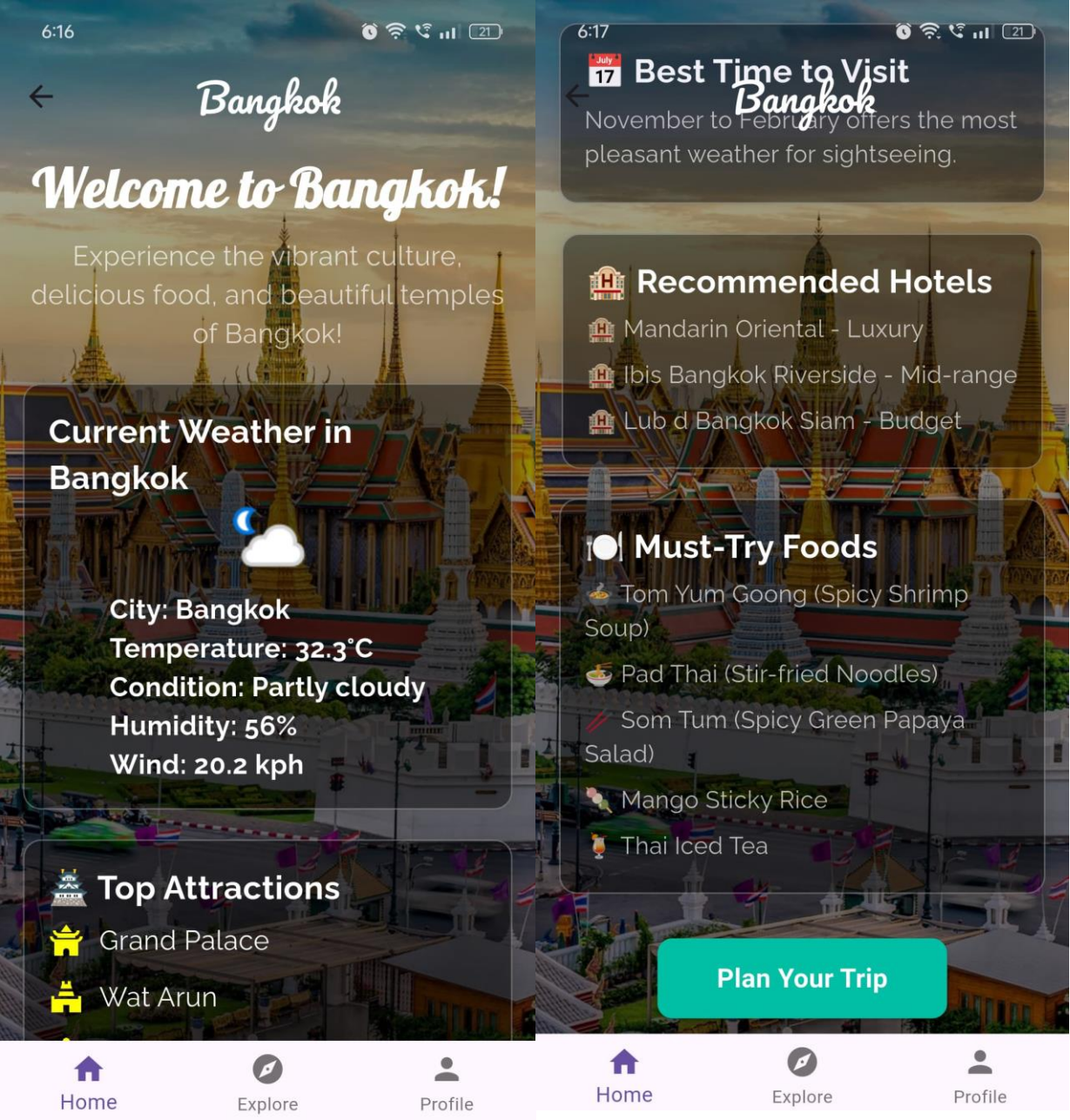
Agra, Paris, Bangkok, Sydney, London, New York,
Moscow, Seoul, Rio de Janeiro, Japan.



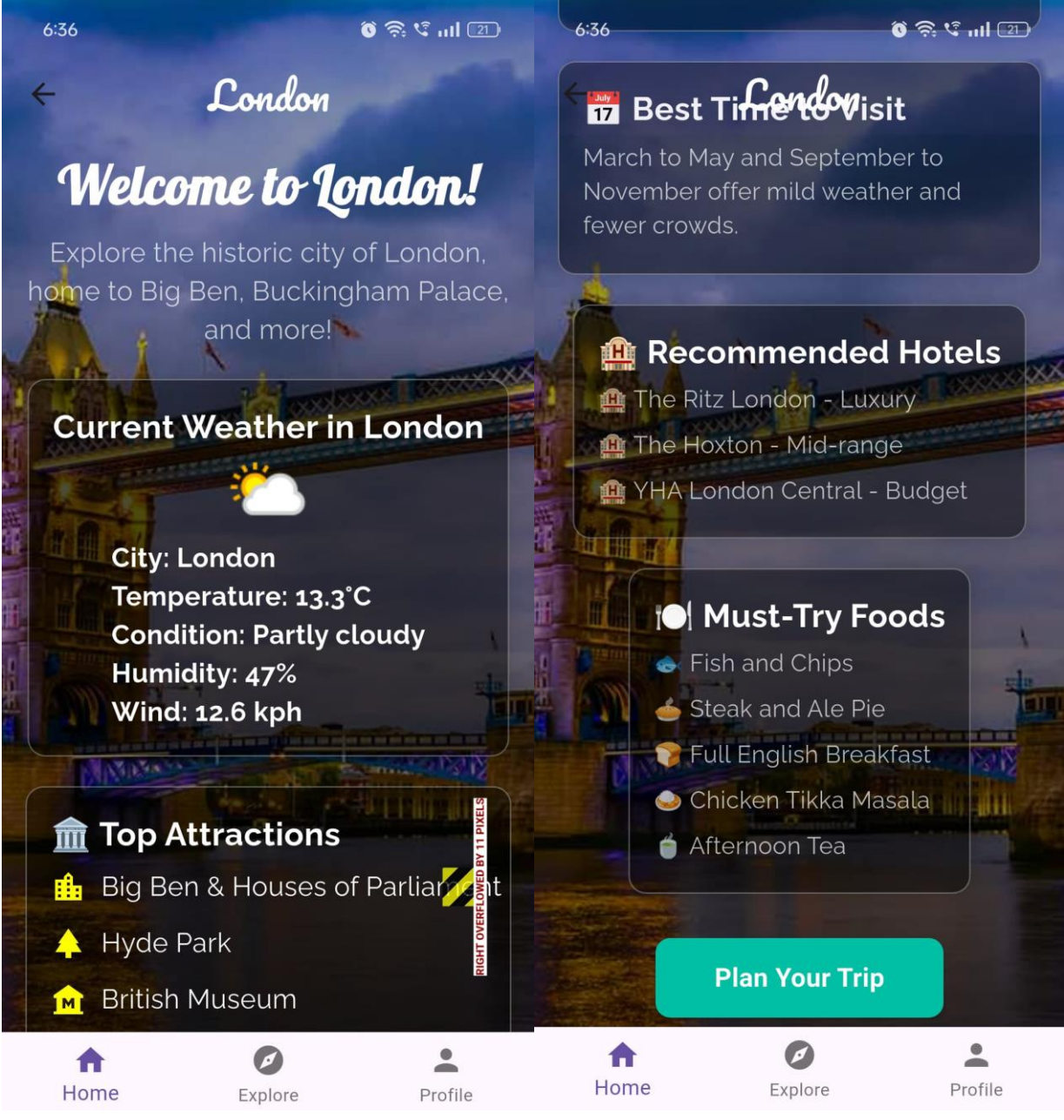
City Page

- This page provides detailed insights into a selected city.
- Includes location details - attractions, Best time to visit the city Hotels, Must try foods.
- Real-time weather updates fetched via Weather API.
- Users can select this destination and proceed to trip planning by clicking 'Plan Your Trip' button which navigates to the trip planning page.

Ex: Bangkok Page



London Page

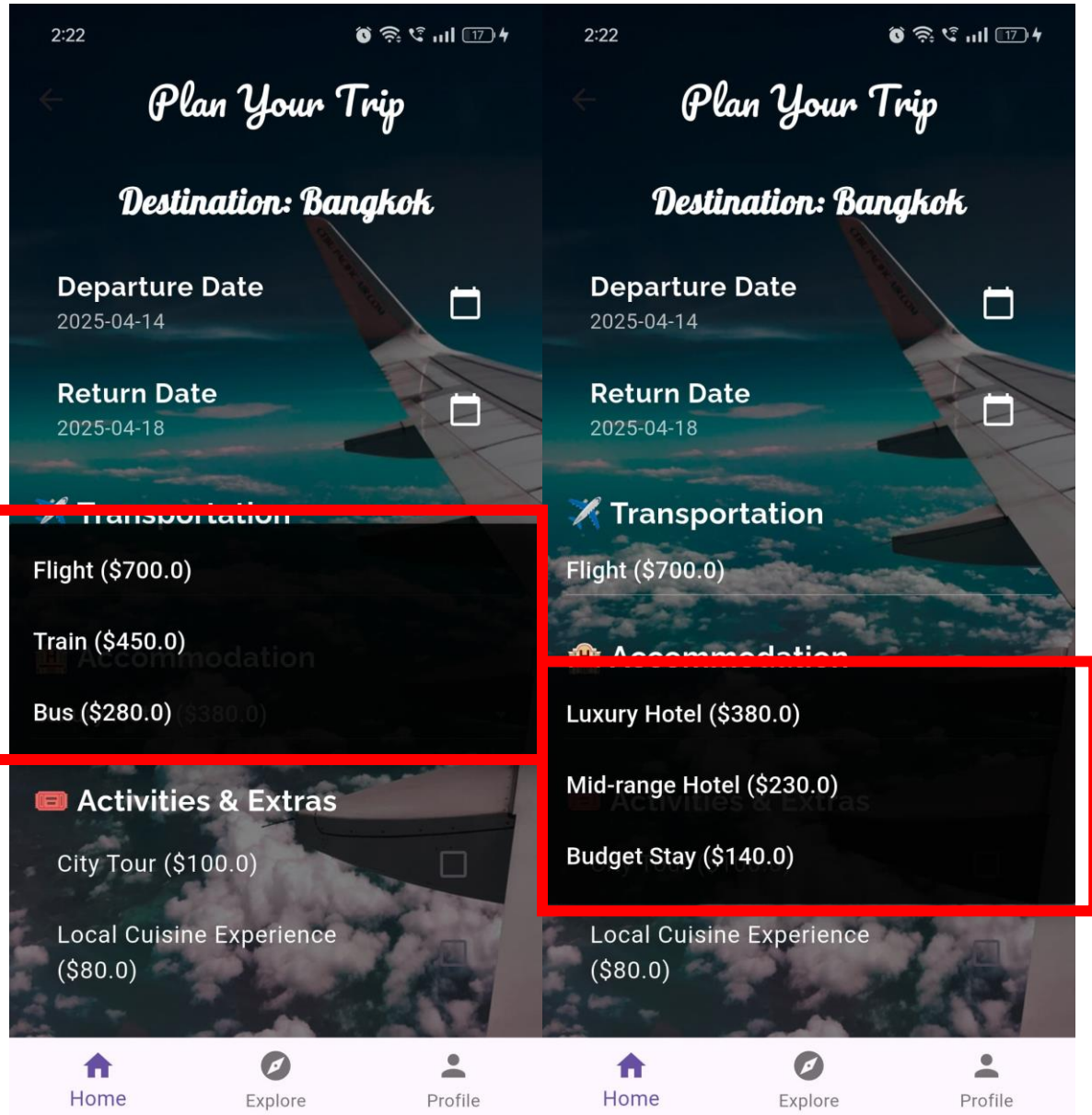


Plan Your Trip Page

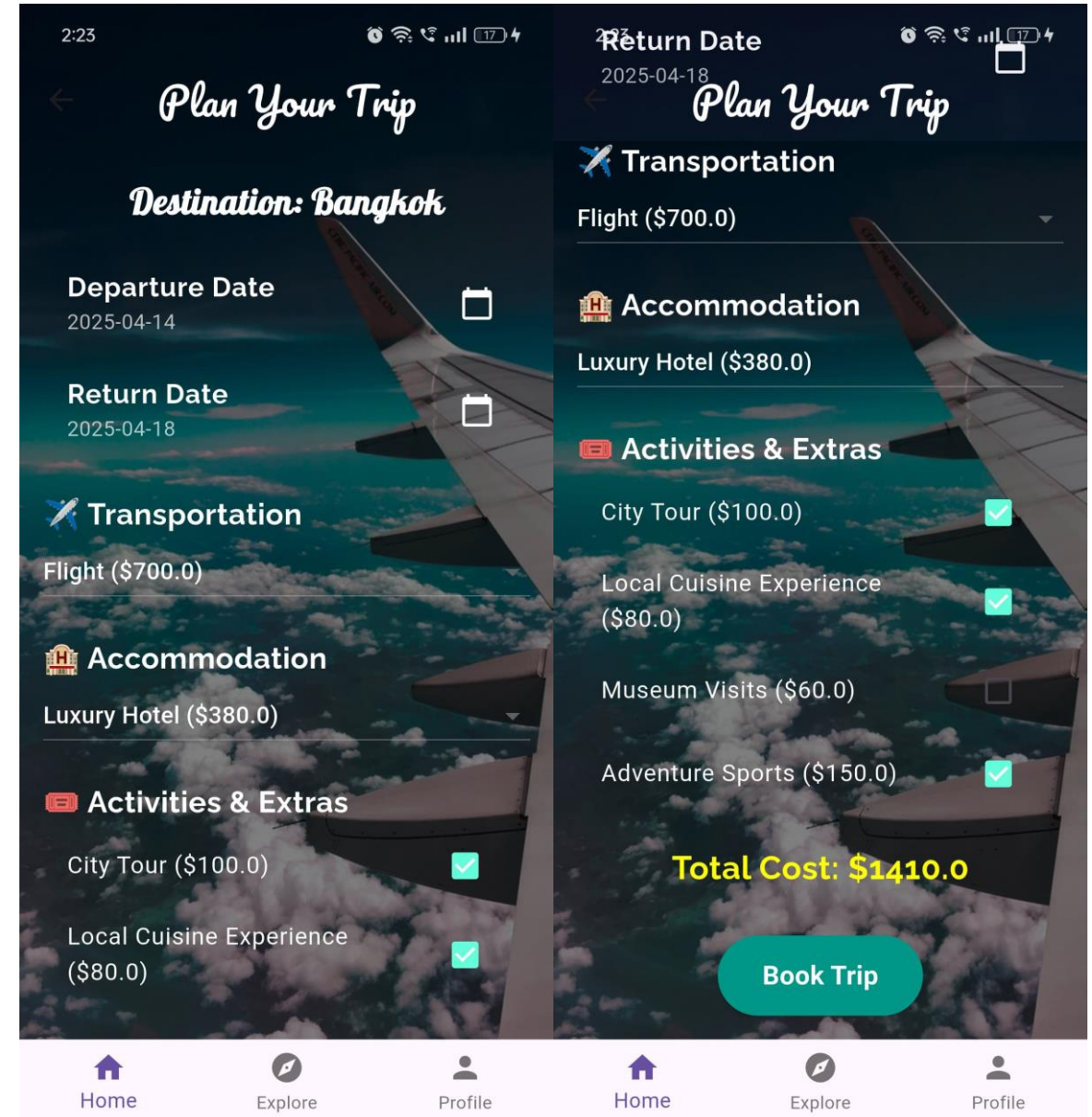
Users select a destination and customize their trip:

- Choose transportation (flight, train, bus).
- Select accommodation type (Luxury Hotel, Mid-range Hotel, budget stay).
- Pick extra activities (city tour, adventure sports, local cuisine experience and museum visit).
- Dynamic cost calculation for the entire trip.
- Click 'Book Trip' button, that navigates to Confirm Booking page

Dropdowns for Transportation and Accommodation



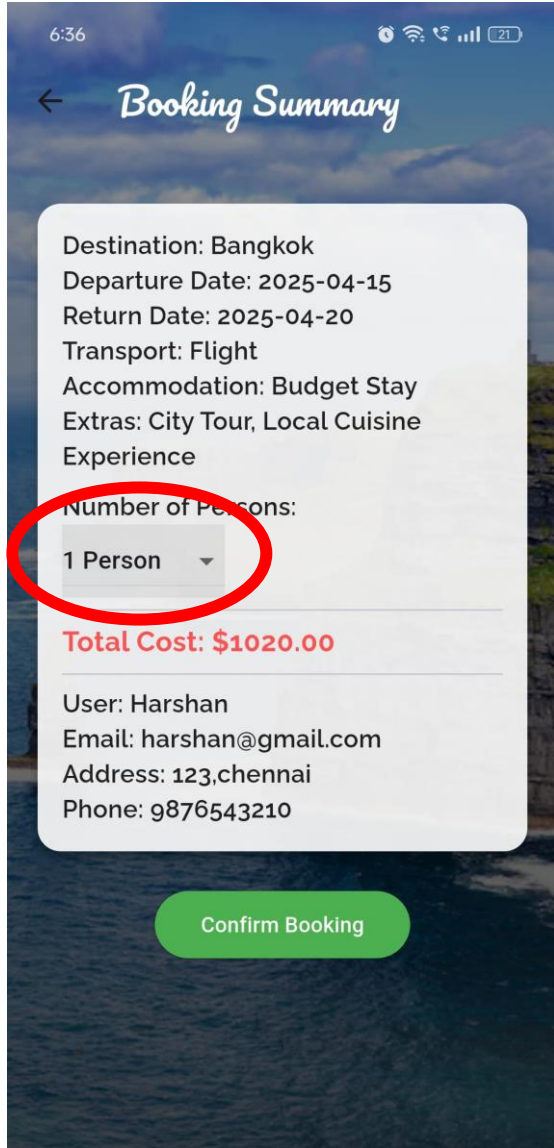
After Planning the trip



Booking Page

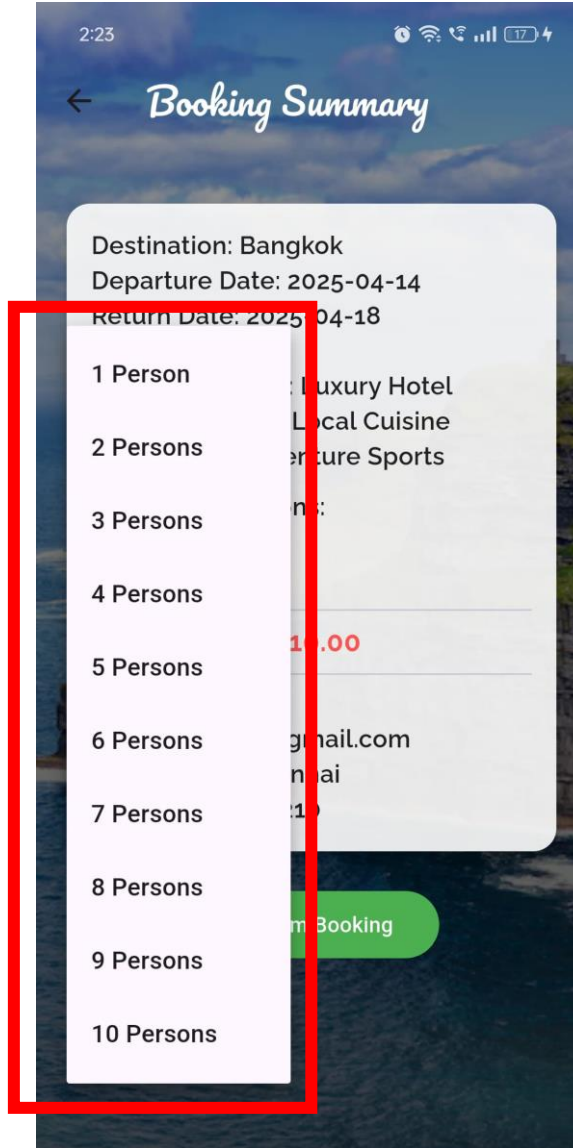
- Displays the selected trip details and user details fetched from the Profile page.
- Dropdown to select the no.of people coming for the trip and calculate the total cost according to it.
- Allows users to confirm their booking.
- Once confirmed, a pop-up message will appear to notify the user and the booking summary is stored and emailed to the user.
- Firebase Firestore stores the booking details for future reference.
- Then it navigates to the home page.

(1)



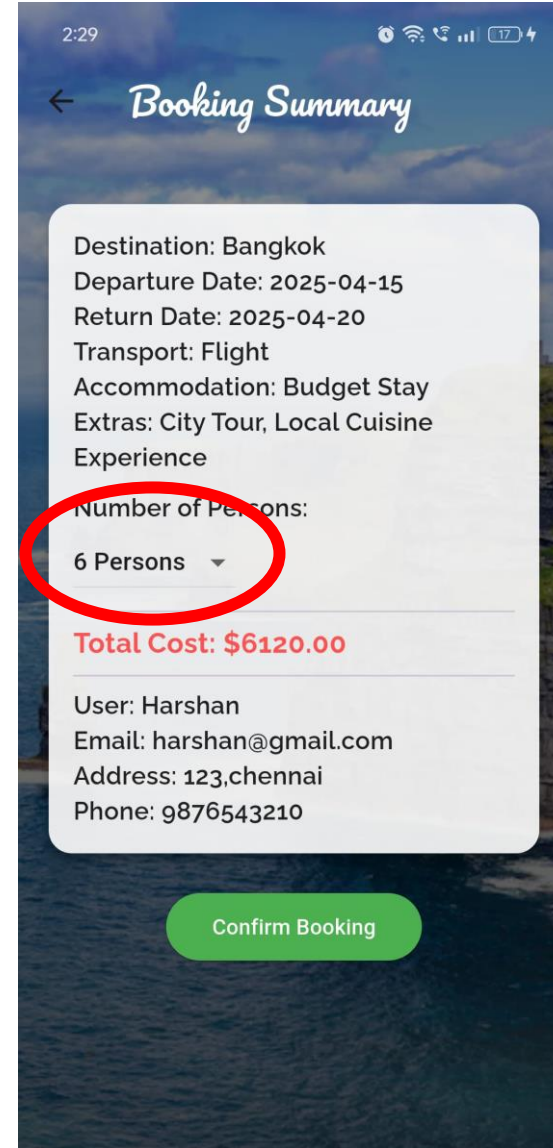
Booking summary and
Total Cost for 1 person

(2)



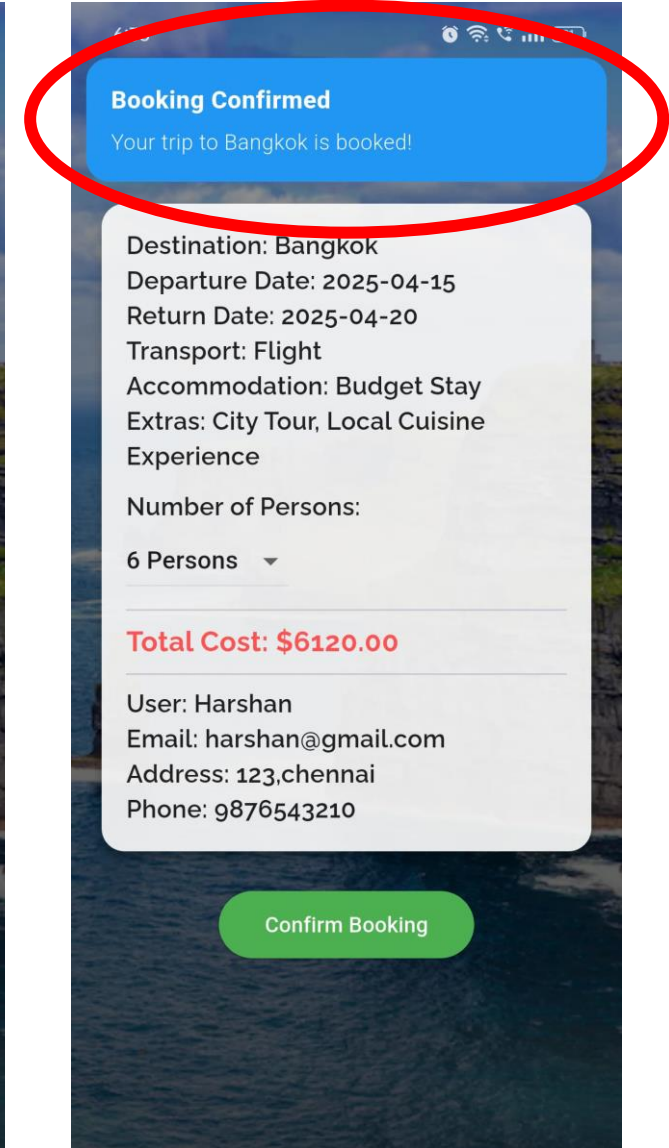
Dropdown to select
no.of persons

(3)



Selecting 6 persons and
the total cost is changed

(4)

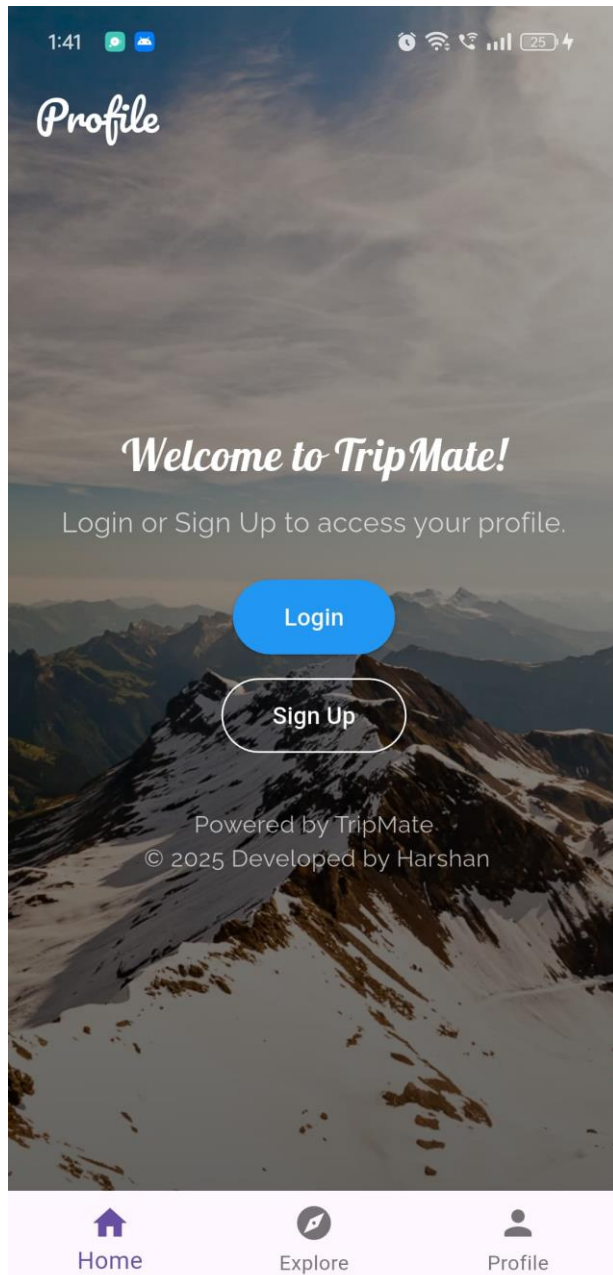


After clicking 'Confirm Booking'
Booking confirmed message is popped

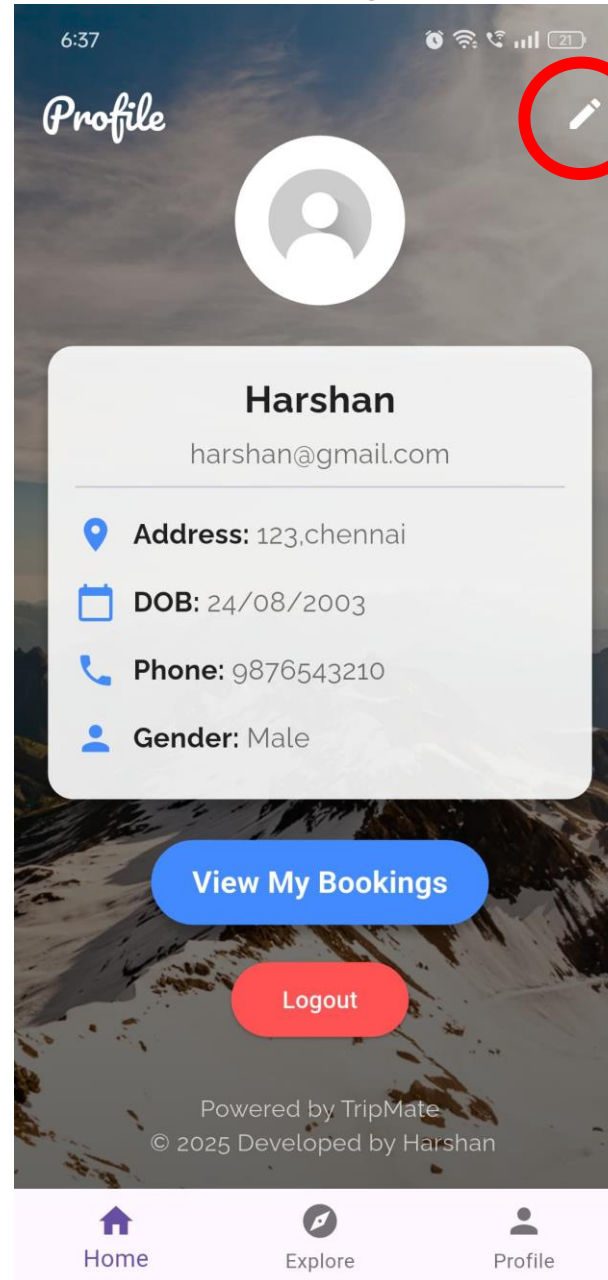
Profile and Edit Profile Page

- Shows user profile details including:
Profile Image, Name, address, email, phone, DOB and gender.
- If the user is not logged in, it prompts for Login/Signup.
- Displays a button 'View My Bookings' to view the past bookings and 'Logout' button to logout current profile.
- A 'Pen icon' button in the top right corner navigates to edit profile page.
- where users can update their profile image, name, address, phone number, gender, and DOB.

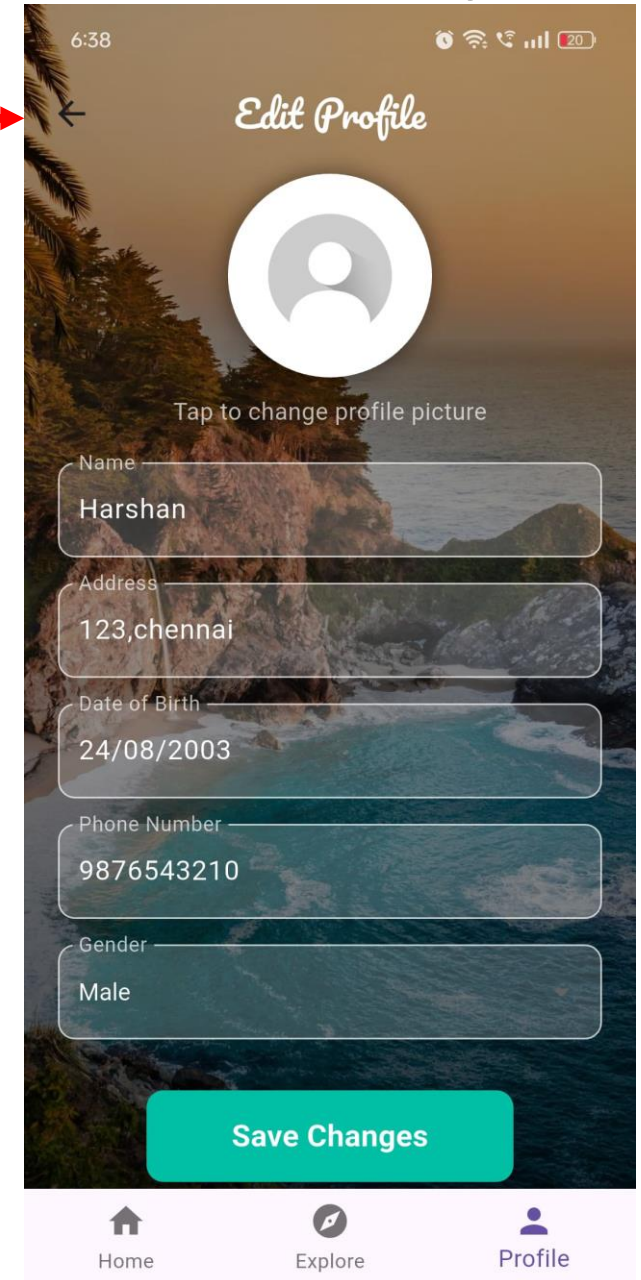
Before Login



After Login



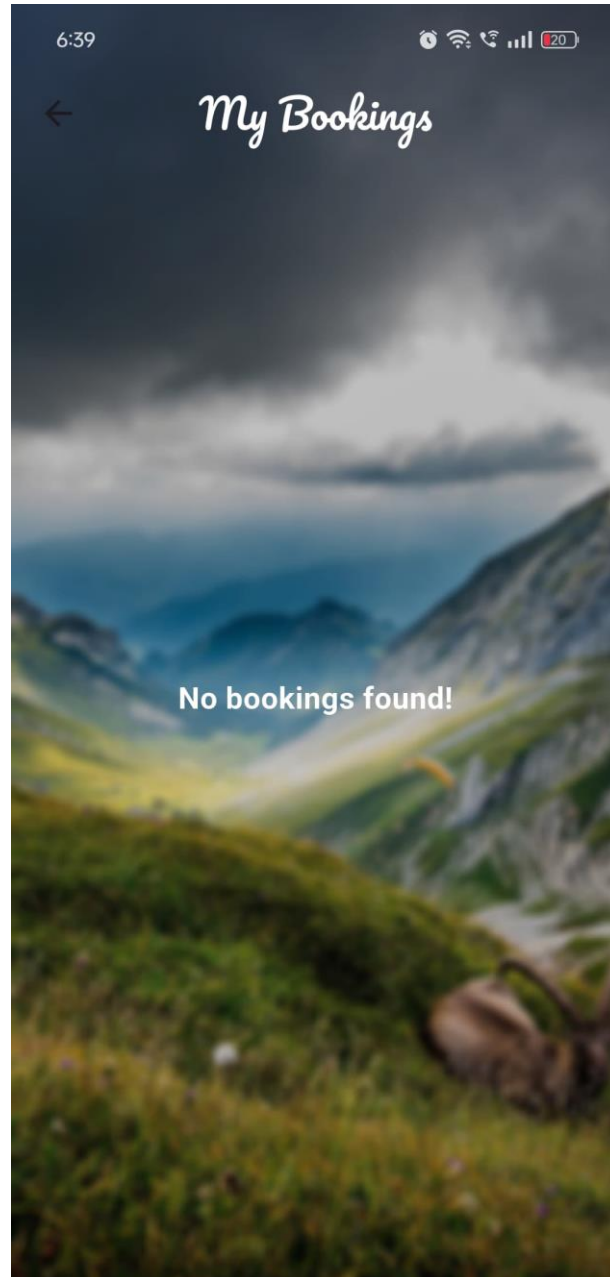
Edit Profile Page



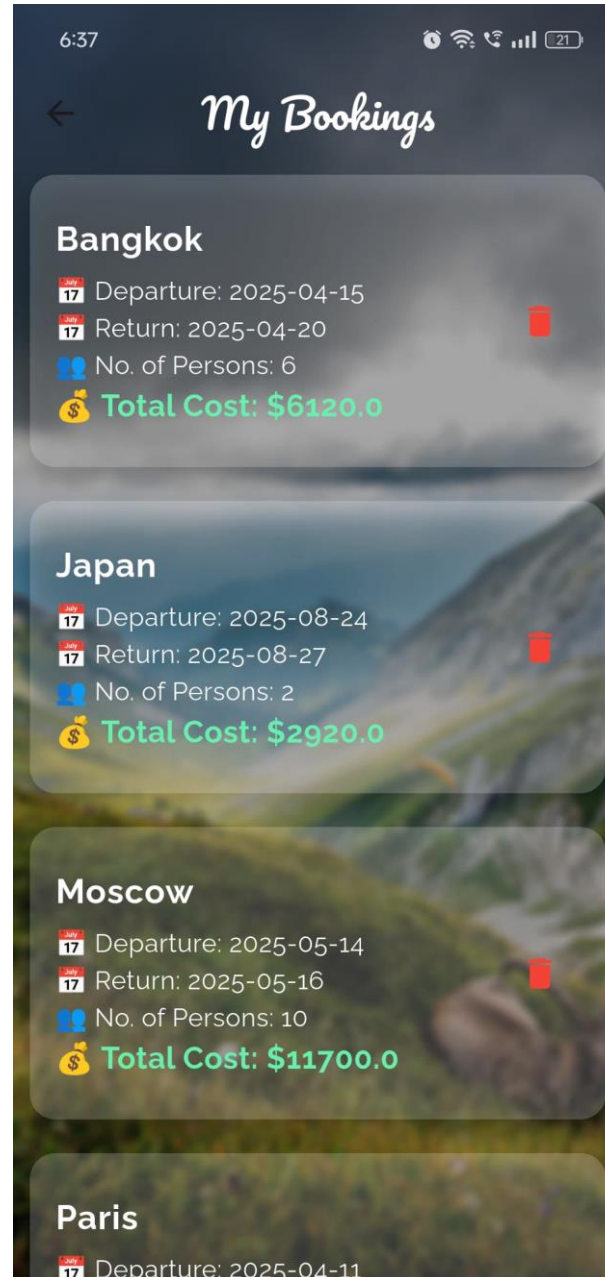
My Bookings Page

- Displays all past bookings of the logged-in user by fetching the
- Booking details from the firebase
- Each booking entry includes:
 - Destination, dates, no.of persons and total cost.
- Users can view details and delete bookings if needed using the Bin icon.
- After deleting the booking detail, a pop-up message will appear to notify the user that the booking is removed.

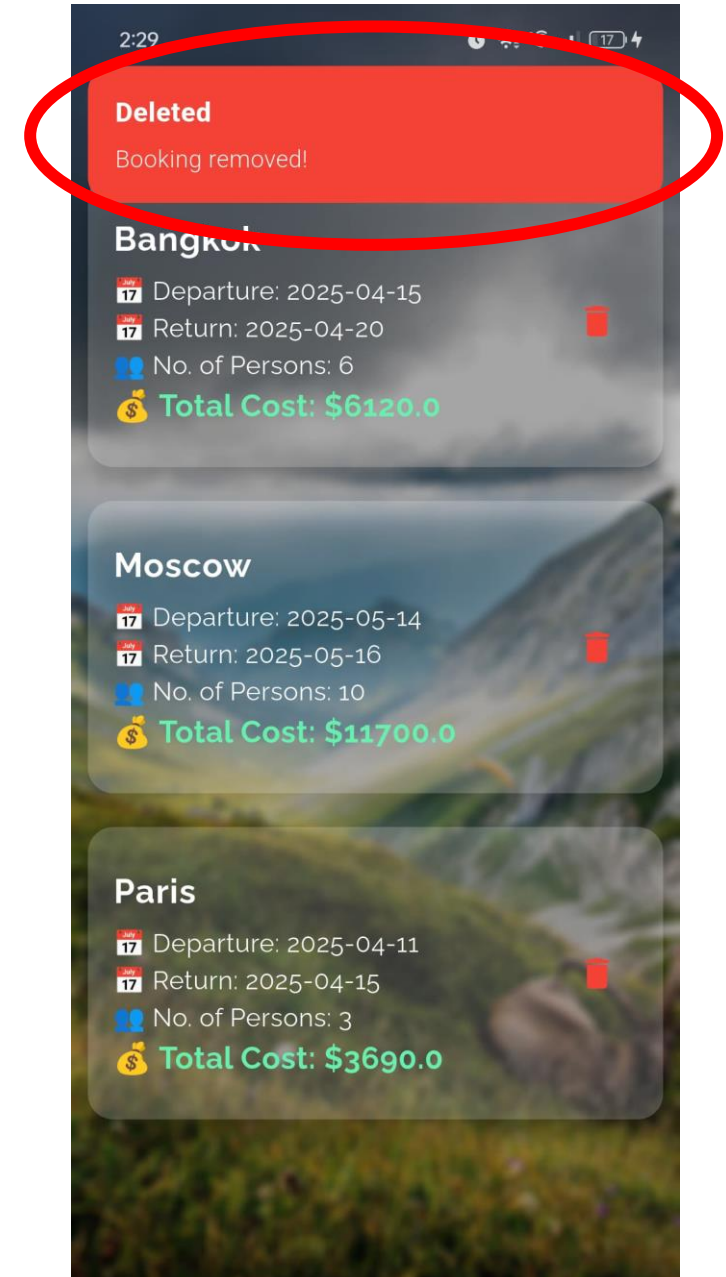
Before Booking



After Booking



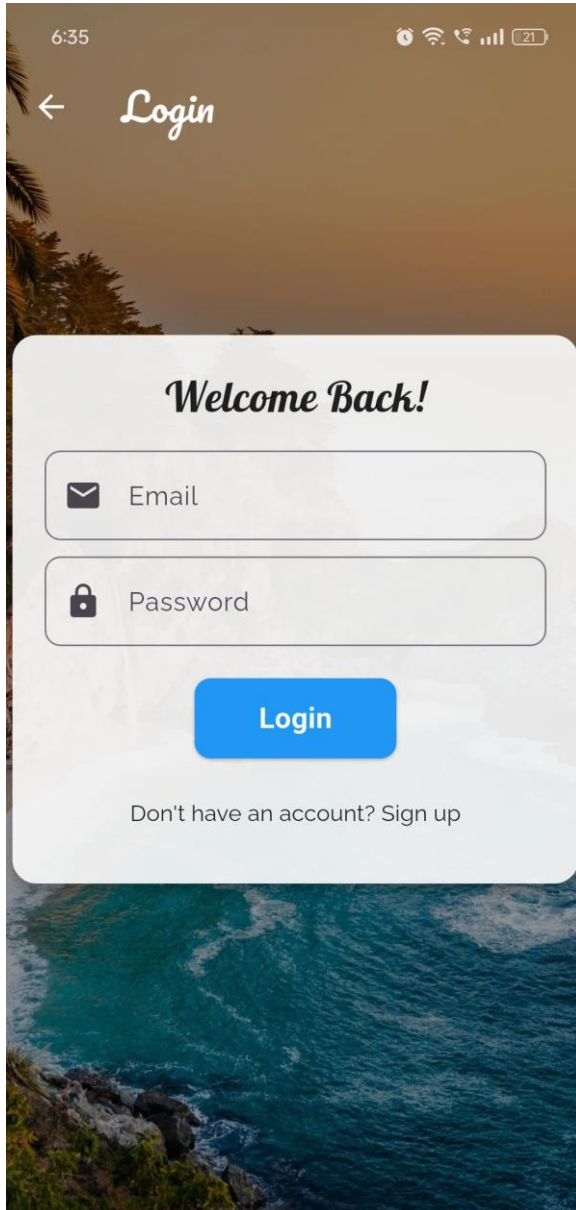
After deleting the booking detail



Login and Signup Pages

- The Login/Signup Page ensures secure access using Firebase Authentication.
- Users can either log in if they have an account or sign up with their details.
- Firebase validates user credentials and securely stores them in Firestore.
- If logged in, a pop-up message like “Login Successful” appears and users can access profile details, saved bookings, and personalized experiences.
- Firebase Authentication ensures that users cannot sign up with an existing email.
- If a user tries to register again with the same email, the app displays an error message like:
"This email is already in use by another account“.
- This prevents duplicate accounts and ensures data integrity.

Login Page



6:35

← Login

Welcome Back!

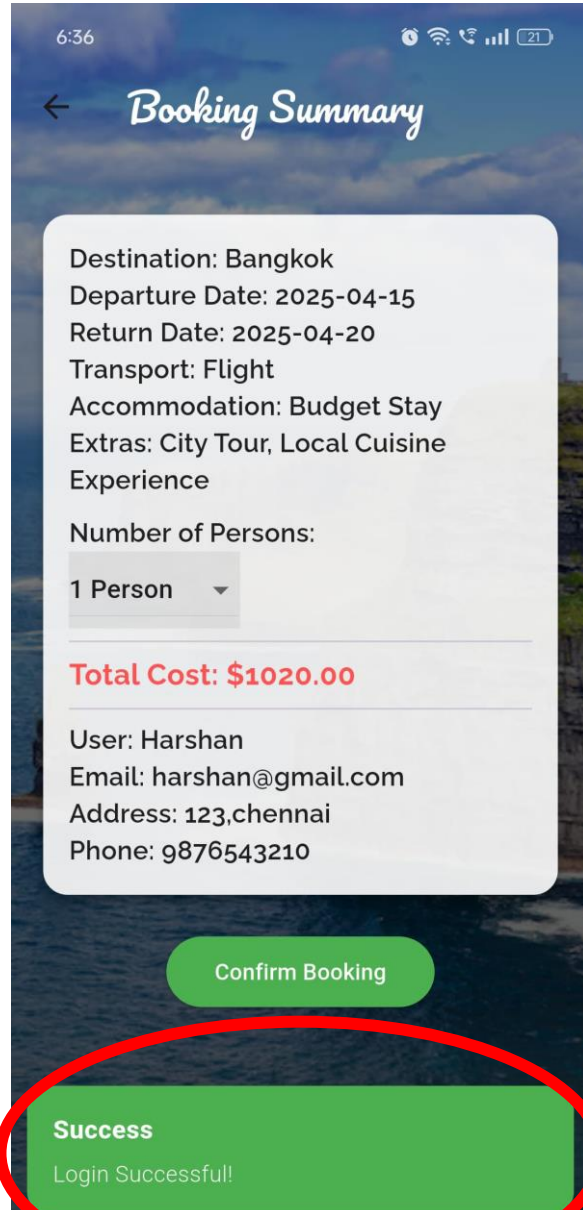
Email

Password

Login

Don't have an account? Sign up

After Login



6:36

← Booking Summary

Destination: Bangkok
Departure Date: 2025-04-15
Return Date: 2025-04-20
Transport: Flight
Accommodation: Budget Stay
Extras: City Tour, Local Cuisine Experience

Number of Persons:
1 Person

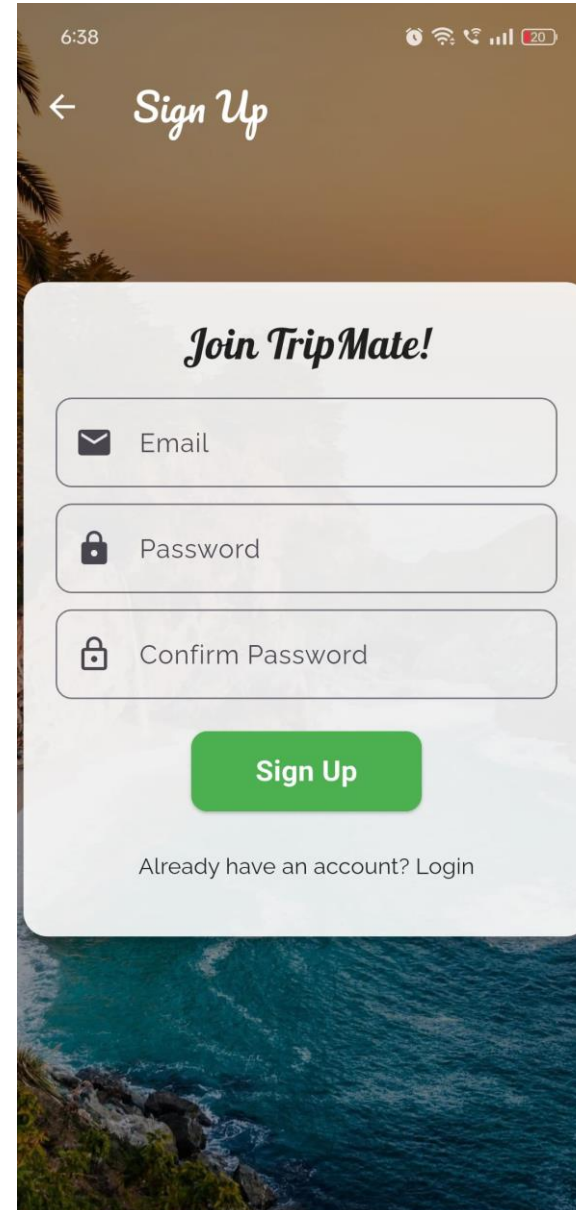
Total Cost: \$1020.00

User: Harshan
Email: harshan@gmail.com
Address: 123, chennai
Phone: 9876543210

Confirm Booking

Success
Login Successful!

Signup Page



6:38

← Sign Up

Join TripMate!

Email

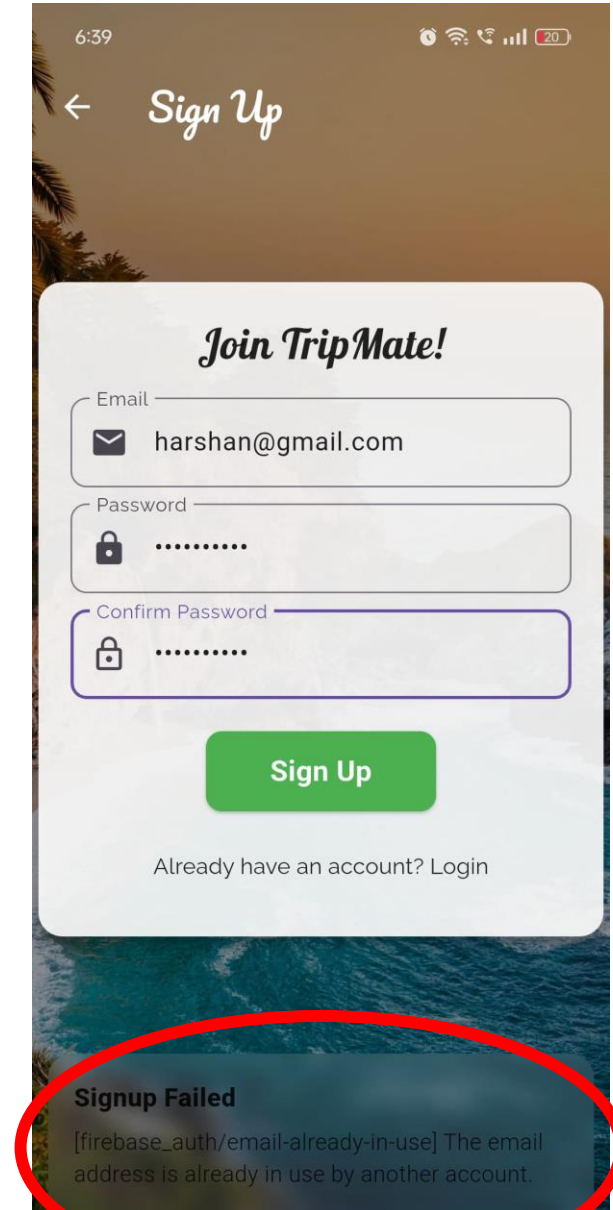
Password

Confirm Password

Sign Up

Already have an account? Login

If Signed in with already existing user id



6:39

← Sign Up

Join TripMate!

Email
harshan@gmail.com

Password
.....

Confirm Password
.....

Sign Up

Already have an account? Login

Signup Failed
[firebase_auth/email-already-in-use] The email address is already in use by another account.

Firebase Integration

- Authentication: Firebase Auth allows secure user login & signup with email/password authentication. It verifies credentials, prevents duplicate accounts, and manages user sessions.
- Database: Firestore stores user profiles, bookings, and trip details in a real-time NoSQL database. It ensures automatic data sync and retrieval for a seamless user experience.
- Email Confirmation: After booking, an email confirmation is sent to the user with trip details. It includes destination, dates, transport, accommodation, and total cost.

Firebase Authentication:

traveldb - Authentication - User

console.firebase.google.com/project/traveldb-56c7d/authentication/users

traveldb

Authentication

UsersSign-in methodTemplatesUsageSettingsExtensions

The following Authentication features will stop working when Firebase Dynamic Links shuts down on August 25, 2025: email link authentication for mobile apps, as well as Cordova OAuth support for web apps.

Search by email address, phone number, or user UID

Add user

Identifier	Providers	Created	Signed In	User UID
raina@gmail.com		Mar 28, 2025	Mar 28, 2025	tZP5sk41VJXS2nFRotCX.JvsT...
dhoni@gmail.com		Mar 28, 2025	Mar 29, 2025	t1B7DszIT7NXyul4PZ1xUNAm...
leo@gmail.com		Mar 27, 2025	Mar 28, 2025	OmtSYbXkksYDKo.JyWslr2nRT...
harshan@gmail.com		Mar 27, 2025	Mar 30, 2025	DzHue1wFBghKzgy6xwfhbtXQ...

Rows per page: 501 - 4 of 4

Firebase Database for Users:

traveldb - Cloud Firestore - Data

console.firebase.google.com/project/traveldb-56c7d/firestore/databases/-default-/data/~2Fusers~2FDzHue1wFBghKzgy6xwfhbtXQByb2

traveldb Cloud Firestore

Panel view Query builder

users > DzHue1wFBghK.

(default)

+ Start collection

bookings

users >

users

+ Add document

DH15ma10fefz0nBnq0LRIdECJqG2

DzHue1wFBghKzgy6xwfhbtXQByb2 >

t1B7DsziT7NXyu14PZ1xUNAmzXT2

DzHue1wFBghKzgy6xwfhbtXQByb2

+ Start collection

+ Add field

address: "123,chennai"

dob: "24/08/2003"

gender: "Male"

name: "Harshan"

phone: "9876543210"

profilePicture: ""

More in Google Cloud

Database location: nam5

Firebase Database for Bookings:

traveldb - Cloud Firestore - Dat

console.firebase.google.com/project/traveldb-56c7d/firestore/databases/-default-/data/~2Fbookings~2FcbvNUBxDf7NM3ILS84ov

traveldb Cloud Firestore

Panel view Query builder

bookings cbvNUBxDf7NM.

(default)

bookings

cbvNUBxDf7NM3ILS84ov

+ Start collection

bookings

users

+ Add document

XDoWKA0oAAkMODpymbHV

cbvNUBxDf7NM3ILS84ov

fRLxW4yJ8ac60BjtYFeA

hkoqzBtnkpIYM1GexvVP

s7rV05oMPDC7rrfJsiSg

+ Start collection

+ Add field

accommodation: "Budget Stay"

departureDate: "2025-04-15T00:00:00.000"

destination: "Bangkok"

extras

0 "City Tour"

1 "Local Cuisine Experience"

numPersons: 6

returnDate: "2025-04-20T00:00:00.000"

timestamp: March 30, 2025 at 2:29:09 AM UTC+5:30

totalCost: 6120

transport: "Flight"

userEmail: "harshan@gmail.com"

userId: "DzHue1wFBghKzgy6xwfhbtXQByb2"

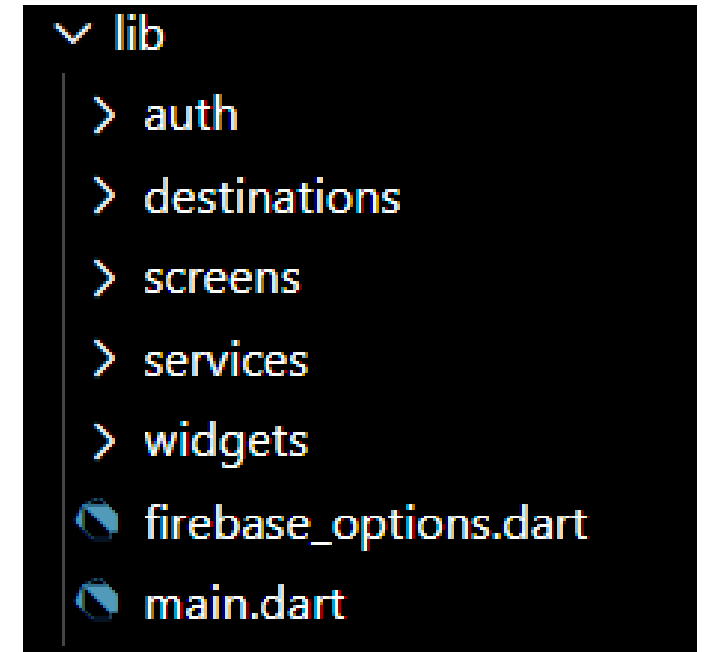
Database location: nam5

Navigation & UI

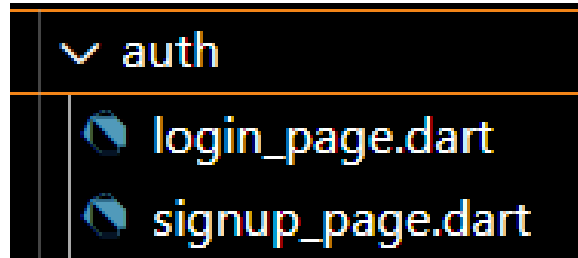
- **GetX Navigation:** Enables smooth, efficient, and context-free page transitions, ensuring fast navigation.
- **Bottom Navigation Bar:** Allows seamless switching between Home, Explore, and Profile with intuitive icons.
- **Modern UI:** Integrates Google Fonts and Material UI elements for a clean, responsive, and visually appealing design.
- **Animations & Gestures:** Enhances user experience with smooth transitions, swipe gestures, and interactive elements.

Code Structure

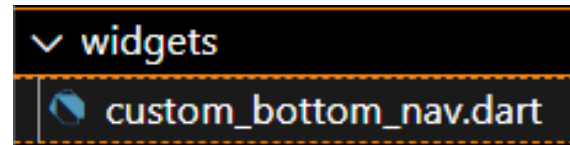
- **main.dart** – Entry point of the application.
- **firebase_options.dart** – Firebase integration.
- **screens/** – Contains UI pages.
- **destinations/** – Stores different travel location details.
- **auth/** – Handles login/signup.
- **services/** – API calls and Firebase interactions.
- **widgets/** – Reusable UI components.



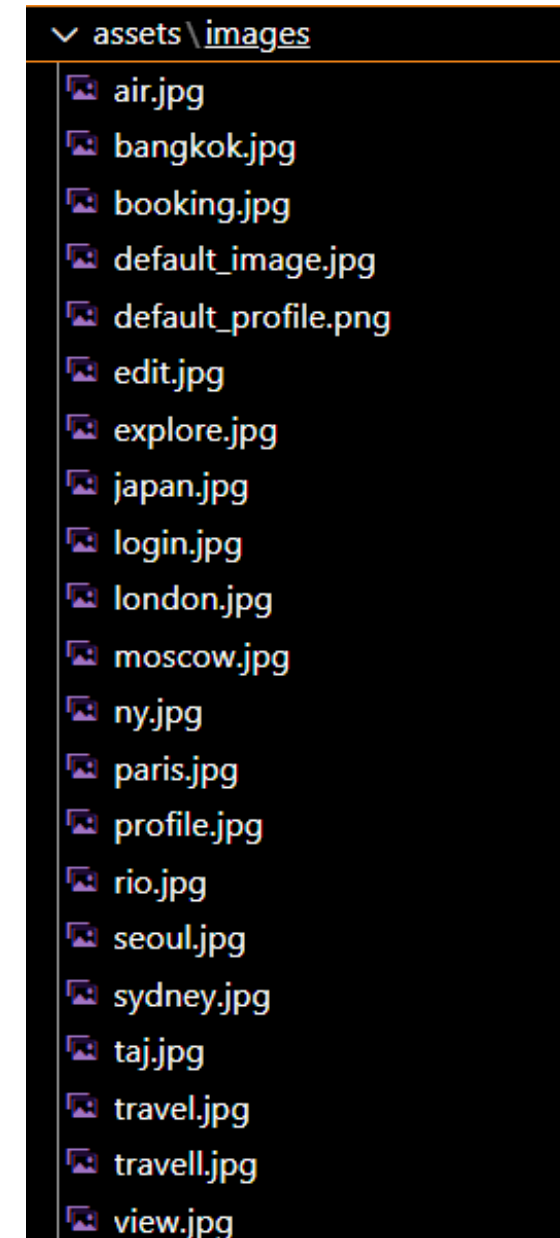
auth/



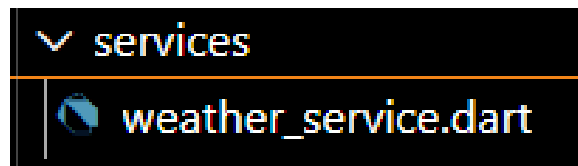
widgets/



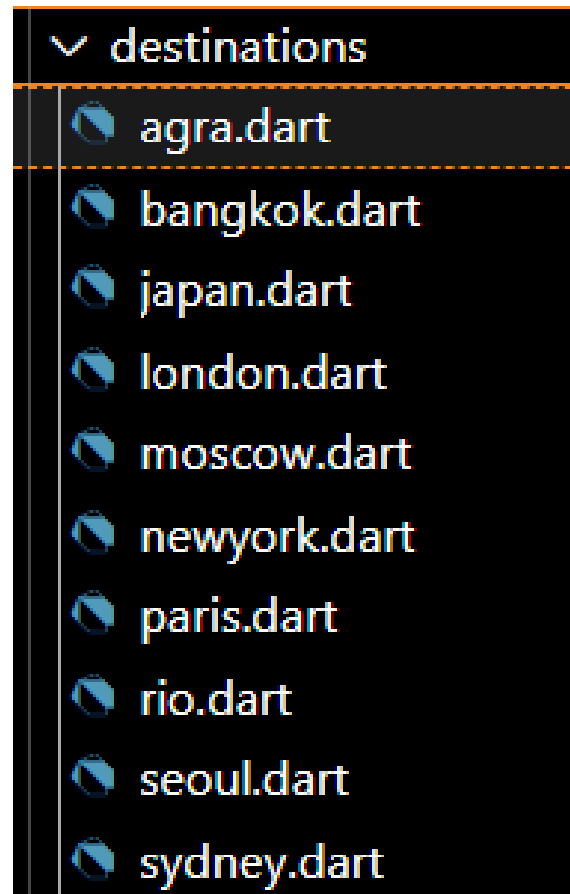
assets/images/



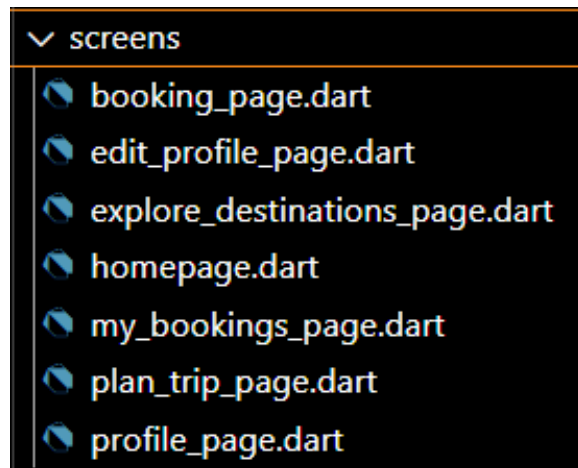
services/



destinations/



screens/



Future Enhancements

- **AI-based travel suggestions:** Uses AI to recommend destinations based on user preferences and past trips. Enhances trip planning by suggesting activities, accommodations, and transport options.
- **Currency conversion feature:** Converts trip costs into the user's preferred currency in real time. Helps travelers easily understand expenses without manual calculations.
- **Offline access for trip details:** Allows users to access booked trip details without an internet connection. Ensures seamless travel by storing key information locally on the device.
- **Multilingual support:** Provides translations to support users from different regions globally. Enhances accessibility and user experience for non-English speakers.

Conclusion

- TripMate is a comprehensive travel companion app that streamlines trip planning, booking, and management in a single platform.
- It provides a seamless and user-friendly experience, ensuring travelers can plan efficiently with real-time cost calculations.
- The app is built with Firebase authentication for secure login/signup and Firestore to store user details and trip bookings.
- Integrated email confirmation allows users to receive booking details instantly after confirmation.
- Dynamic trip customization enables travelers to select destinations, accommodations, and transportation with estimated costs.
- Secure payment integration ensures a hassle-free checkout process, making travel bookings safe and easy.

Thank You